



## EPA's Proposal to Reduce Climate- and Health-Harming Pollution from the Oil and Natural Gas Industry: Overview

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EPA is taking a significant step in fighting the climate crisis and protecting public health through a proposed rule that would sharply reduce methane and other harmful air pollution from both new and existing sources in the oil and natural gas industry.

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- EPA's proposal would secure major climate and health benefits for all Americans by leveraging innovative technologies and proven, cost-effective solutions that major oil- and gas-producing states and leading companies are already using to minimize or eliminate this harmful pollution.
- The oil and natural gas industry is the nation's largest industrial source of methane, a highly potent climate pollutant that is responsible for approximately one-third of current warming from human activities.
- This sector is also a leading source of other harmful air pollutants, including volatile organic compounds that contribute to ground-level ozone ("smog") and air toxics such as benzene that are emitted along with methane and that affect the health of people and communities who live and work near oil and gas facilities.
- The proposed rule reflects ideas and information from a diverse range of perspectives, including state and local governments, tribal nations, communities affected by oil and gas pollution, environmental and public health organizations, and representatives of the oil and natural gas industry.
- EPA intends to issue a supplemental proposal in 2022 and is requesting comments and information to help the Agency evaluate opportunities to obtain additional pollution reductions, including from certain sources not covered by the proposal.
- After taking public feedback into account, EPA intends to finalize requirements for new and existing oil and natural gas sources that are strong, far-reaching and ambitious, and that are anchored in science and the law. The Agency plans to issue a final rule before the end of 2022.

EPA's Proposed New Source Performance Standards and Emissions Guidelines for Existing Sources would:

- Require **states to reduce methane emissions** from hundreds of thousands of existing sources nationwide for the first time;

- Expand and strengthen emissions reduction requirements that are currently on the books for new, modified and reconstructed sources in the oil and natural gas industry; and
- Encourage the use of innovative methane detection technologies and other cutting-edge solutions, many of which are being developed and deployed by small businesses providing good-paying jobs across the United States.

EPA's Proposal Would Significantly Reduce Emissions, with Benefits that Far Outweigh the Costs of Compliance. The proposal would:

- Reduce methane emissions by approximately 41 million tons through 2035, the equivalent of 920 million metric tons of carbon dioxide – more than the amount of carbon dioxide emitted in 2019 from all U.S. passenger cars and commercial aircraft combined. In 2030 alone, the proposed rule would reduce methane emissions from covered sources by an estimated 74 percent compared to emissions from those sources in 2005.
- Avoid 12 million tons of smog-forming VOC pollution and 480,000 tons of air toxics pollution through 2035.
- Yield nearly \$4.5 billion in net climate benefits a year, with total net benefits valued at \$48 to \$49 billion from 2023 through 2035.
- Increase recovery of natural gas, valued at \$690 million in 2030 alone, that otherwise would go to waste.

The Proposal Recognizes States' and Tribes' Unique Roles

- Section 111(d) of the Clean Air Act assigns states the job of developing plans that establish standards for existing sources. EPA's proposal sets out Emissions Guidelines that include clear presumptive standards to assist states in developing their plans, along with procedures that include requirements for states to undertake meaningful outreach and engagement with overburdened and underserved communities as they develop their plans.
- Some forward-looking states have their own regulations for methane emissions from the oil and gas industry, and EPA's proposal provides states the opportunity to leverage their existing programs or develop new programs that are at least as effective as the presumptive standards.
- Eligible tribes would have the opportunity, but not the obligation, to develop plans that establish standards for existing sources on their tribal lands. EPA has the authority to develop a plan for tribes that do not wish to develop their own.

## Key components of the proposal include:

### Finding and Repairing Methane Leaks from Well Sites and Compressor Stations

- EPA is proposing a comprehensive monitoring program to require companies to find and fix leaks (known as “fugitive emissions”) at new and existing well sites and compressor stations.
- The program is designed to focus monitoring efforts on sites and equipment that are most likely to have large emissions.
- It encourages innovation by giving owners and operators the flexibility to use advanced technologies that can find major leaks more rapidly and at lower cost than ever before, and when finalized could include the use of advanced technologies as part of the “best system of emission reduction” for leak surveys at well sites and compressor stations.
  - EPA is seeking comment and information that could support this approach in the final rule.
- The proposed requirements include:
  - Well sites with estimated emissions of 3 tons per year or more must monitor for leaks using optical gas imaging (OGI) or Method 21 quarterly and promptly repair any leaks found. EPA estimates sites emitting 3 tons or more per year are responsible for approximately 86 percent of all fugitive emissions from well sites.
  - Once fully implemented, EPA projects that this proposed program will require routine monitoring at 300,000 well sites nationwide.
  - Well sites with estimated emissions of less than 3 tons per year must promptly conduct a survey (and perform repairs as needed) to demonstrate they are free of leaks or malfunctions but are not required to undertake ongoing monitoring.
    - EPA is seeking comment on whether sites in this category should be required to conduct regular monitoring for leaks if certain leak-prone equipment is present on these sites.
  - EPA is co-proposing a requirement that sites with estimated emissions between 3 and 8 tons per year be monitored semi-annually, rather than quarterly.
  - All new and existing compressor stations would monitor and repair leaks at least once every three months.
  - Surveys must include inspections of equipment that is most prone to large leaks and malfunctions, including hatches on storage tanks and flares
  - Sources on the Alaska North Slope would have different monitoring schedules to account for weather.

### Advanced Methane Detection Technology in EPA's Proposal

- EPA is proposing to give owners/operators the flexibility to use advanced methane detection technologies for leaks surveys at well sites and compressor stations.
- Any technology that meets a rigorous minimum detection threshold would be allowed.
- Surveys using these advanced technologies would be required at least once every two months, and any leaks found would have to be repaired.
- To ensure that smaller leaks are detected, these surveys must be supplemented by annual monitoring using optical gas imaging or EPA Method 21.
- EPA is seeking comment and information on this approach, including whether this advanced technology pathway is the "best system of emission reduction" and should be required for leaks surveys at well sites and compressor stations.
- The Agency also is seeking comments on how continuous monitoring technology could be used for leaks surveys.

### Transitioning to Zero-Emitting Technologies for Pneumatic Controllers

- EPA's proposal would require all new and existing pneumatic controllers at production, processing, and transmission and storage facilities, to have zero methane and VOC emissions, with the exception of sites in Alaska that do not have power. The proposal also would regulate emissions from intermittent vent pneumatic controllers for the first time.
- Natural gas-driven pneumatic controllers are used extensively in production, processing, and transmission and storage facilities. Natural gas emitted from these controllers accounts for nearly 30 percent of all methane emissions from oil and natural gas systems. The vast majority of these emissions come from intermittent-controllers that are currently unregulated under the Clean Air Act.
- Multiple zero-emitting options for these pneumatic controllers exist, and several major oil and gas-producing states and Canadian provinces require, or have proposed to require, their use at new and existing facilities
- EPA's proposal leverages these technologies and existing state-level programs while also providing owners and operators the flexibility to select the technologies and solutions that are appropriate for each location and facility.

### Eliminating Venting of Associated Gas from Oil Wells

- EPA's proposal would eliminate venting of associated gas from oil wells and require owners and operators to route the gas to a sales line where available.

- Oil wells frequently produce significant quantities of “associated” natural gas. In many areas, there is no sales line for this gas, so producers vent it or flare it. This venting, which is currently unregulated under the Clean Air Act, releases significant amounts of methane into the atmosphere (nearly 40,000 tons in 2019 alone).
- EPA’s proposed requirements for new and existing sources include:
  - Producers must capture and send the gas to a sales line if one is available.
  - Where producers do not have access to a sales line, they must:
    - Use the gas for power on site or another useful purpose, or
    - Route it to a flare or control device that reduces methane and VOCs by 95 percent.
  - Recordkeeping and reporting requirements would ensure that flares are operating properly.

### Strengthening Requirements for Storage Tanks

- EPA’s proposal would strengthen requirements for storage tanks by adding tank batteries (groups of tanks that are adjacent and receive fluids from the same source) to the definition of facilities that must reduce VOC and methane emissions.
  - That update would require that new, modified or reconstructed tank batteries with potential VOC emissions of 6 tons or more per year to reduce emissions by 95 percent – the same amount currently required for individual tanks.
  - Under the proposed presumptive standard, existing storage tanks or tank batteries with a potential to emit of 20 tons of methane per year or greater must control their emissions by 95 percent.
  - EPA’s proposal would strengthen compliance by including tank hatches or openings among the types equipment that would have to be monitored for leaks as part of the fugitive emissions program and includes other requirements to ensure that storage tank emissions remain below required levels.

### Broadening the Types of Pneumatic Pumps Covered by the Rule

- EPA’s proposal would extend current requirements for new pneumatic pumps to include all natural gas-driven diaphragm and piston pumps in the production segment of the industry, and diaphragm pumps in the transmission segment. These standards require pneumatic pumps with access to a control device already on site to reduce emissions by 95 percent.
- For existing sources, the presumptive methane standards for pneumatic pumps would mirror those proposed for the NSPS but would exclude piston pumps.
- EPA is seeking comment on whether it is technically feasible to require the use of zero-emitting pneumatic pumps at new and existing facilities with access to electric power or solar power.

## Reducing Additional Methane and VOC Emissions Through New and Stronger Requirements

- Other key elements of EPA’s proposal include:
  - Establishing nationwide requirements to minimize methane and VOC emissions from liquids unloading for the first time;
  - Strengthening current leak detection and repair requirements for new natural gas processing facilities, and including those requirements as presumptive standards for existing sources;
  - Strengthening standards for methane emissions from new reciprocating compressors, and including those requirements as presumptive standards for existing sources; and
  - Proposing presumptive standards for existing centrifugal compressors that require 95 percent control of emissions from wet seal degassing, consistent with current standards for new sources.

### Seeking Additional Information to Inform a Supplemental Proposal

- EPA intends to issue a supplemental proposal in 2022 that will provide proposed regulatory text and may expand on or modify the 2021 proposal in response to public input.
- To inform this supplemental proposal, EPA is seeking information about additional sources of pollution that may help the Agency further reduce methane and VOC emissions from the oil and natural gas sector, including:
  - Abandoned and unplugged wells;
  - Opportunities to improve performance and minimize malfunctions at flares;
  - Pipeline “pigging” operations; and
  - Tank truck loading operations.
- EPA also is seeking comment on how the Agency could provide a way to empower communities, regulators, and the public to assist in identifying and stopping large emission events by detecting and reporting them to owners/operators for follow up and mitigation.
- The Agency also is requesting comment on technologies that may be used as part of such a community monitoring program, how large emissions events should be documented and reported to companies, and what follow-up actions would be appropriate.

### For More Information

- To read the proposed rule and additional fact sheets, visit:  
<https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry>